

Charney

PROPOSED UNITED STATES PARTICIPATION
in the
GLOBAL ATMOSPHERIC RESEARCH PROGRAM

1970-1974
(FY 71-75)

January 9, 1970

5.3.3 It is recommended that the United States participate with facilities and personnel in the proposed international tropical expedition and that the United States suggest 1974 as the preferred date.

5.3.3.1 The proposed expedition will be conducted in either the Eastern Pacific or the Atlantic over a three-month period, and will embrace an area of 1,000 kilometers by 1,000 kilometers. The characteristics of the tropical cloud cluster and its immediate environment will be observed partly through an array of approximately 15 ships. In addition, it is proposed that the nations consider means to investigate the tropical cloud cluster interactions with the synoptic scale motions using available or augmented facilities.

5.3.4 It is recommended that the United States offer to provide 5 suitably instrumented ships as one of its proposed contributions to the expedition.

5.3.4.1 Of these five ships contributed by the United States, four would be required full-time. Possible sources of the ships will be Federal agencies and research centers. There would also be support vessels (buoy tender, fast carrier vessel, and resupply) required, which needs should be partially met by the U.S. The remaining ships would probably come from among other participating nations.

5.3.5 It is recommended that the United States offer to furnish three suitably instrumented aircraft as another key contribution to the experiment.

5.3.5.1 The observation of the ensembles of convective cells will be carried out primarily through the use of appropriately instrumented aircraft. The detailed specification for the manner in which these aircraft will be deployed, the precise instrumentation required, and the observational techniques to be used will be tested and studied in small-scale tests over the next two years. It is anticipated that at least six of these research aircraft will be needed. Assuming that the time and place of the experiment does not interfere with the national hurricane needs for aircraft, it seems reasonable that three aircraft can be obtained from the same sources indicated in paragraph 5.3.4.1. In addition, weather reconnaissance aircraft may be deployed for additional observations outside of the cloud cluster on an "as available" basis.

5.3.6 It is recommended that the U.S. offer to make available both its operational and research weather satellites as key elements of the expedition.